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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,558	09/22/2003	John H. Sohl III	36507-193188	5541

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EXAMINER

MOSS, KERI A

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,558

Applicant(s)

SOHL ET AL.

Examiner

Keri A. Moss

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/14/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 12-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. One of ordinary skill in the art would not know the specific details of the Membrane Interface Probe. While applicant refers to the '956 patent apparatus as a Membrane Interface Probe, the '956 patent does not refer to the apparatus by that name. This incongruence causes confusion and, as a result, the examiner does not know the details of the Membrane Interface Probe as incorporated by applicant. When using the term "Membrane Interface Probe" or "MIP," is the applicant referencing the Membrane Interface Probe sold by Geoprobe Systems, Inc.? If so, applicant must provide details of the components and the function of that specific apparatus.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-30 are rejected under 35 U.S.C. 112, second paragraph.

Claims 12-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has not adequately described what a Membrane Interface Probe sensor is.

The term "larger" in claims 12-16 is a relative term that renders the claim indefinite. The term "diameter" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicant has not provided a definite size limitation for the device claimed. All subsequent uses of the term "larger" render the claim indefinite.

The term "conventional" in claim 12 is a relative term that renders the claim indefinite. The term "MIP sensor" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. What is conventional today may not be so tomorrow. Applicant has not provided a definite size limitation.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 provides for the use of MIP sensor with larger capacity push and hammer systems, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending

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to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 provides for the use of MIP sensor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the location of the membranes and to what they are attached.

The term "increase likelihood" in claim 19 is a relative term which renders the claim indefinite. The term "collection" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The sensor either works to collect volatile organic mass or it does not.

The term "adapted to improve" in claim 20 is a relative term which renders the claim indefinite. The term "watertight integrity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one

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of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The sensor either has watertight integrity or it does not.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "conductivity nose assembly" is vague and indefinite and is not defined by the claim or the specification.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "lower" in claim 27 is a relative term that renders the claim indefinite. The term "levels of concentration" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicant has not explained how the membrane interface probe apparatus provides for calibration of the membrane interface probe sensor by chromatographic methods. Nor has applicant given a description of the chromatographic methods that can be used for calibration.

Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The terms "footprint" and "cost" are vague and

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indefinite for failing to provide a definite relative number. Applicant has not provided a definite quantity or a percent reduction in order to inform others of what falls within the limits of the claim. In addition, claim 31 is vague and indefinite for not specifying whether applicant is claiming a single sampling line moved to the source or a manifold sampling system connected to different sources.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Robbat (USP 5,970,804). Robbat claims an enhanced scanning solutions module as claimed (See Figure 8d and respective portions of the specification). The module comprises a flow control subsystem 607 coupled to a detector subsystem 605, a dryer/moisture separator subsystem 603, a sampling subsystem 601 and a software control subsystem 639, 667, 679. The sampling subsystem comprises an absorbent trap. The module further comprises an exhaust 635 and a power supply 667. The software control subsystem is coupled to the detector subsystem, the sampling subsystem and the dryer/moisture separator subsystem. The module can be reconfigured and comprises a plurality of operator-selectable modes and a plurality of pre-programmable modes

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(Column 10 lines 1-11). There is an interface between the detector subsystem and a gas handling subsystem that allows insertion of a dryer (Column 24 lines 35-37). The software control subsystem comprises a data logger (Column 9 line 55).

7. Claims 1-32 are rejected under 35 U.S.C. 102(a) as being anticipated by Adriany (USP 6,405,135 B1). Adriany claims an enhanced scanning solutions module as claimed (See Figure 3 and respective portions of the specification). The module comprises a flow control subsystem 34 coupled to a detector subsystem 10, a dryer/moisture separator subsystem 48, a sampling subsystem 44 and a software control subsystem 16 connected to the detector subsystem (Column 3 lines 46-48). The sampling subsystem comprises an absorbent trap 46. The module further comprises a power supply 62, a bypass module (Fig. 1 path 19-22 or 19-20), and a feedback signal (abstract lines 12-16). The software control subsystem is coupled to the detector subsystem, the sampling subsystem and the dryer/moisture separator subsystem. The module can be reconfigured (Column 8 lines 1-3) and comprises a plurality of operator-selectable modes (inherent in description in Column 6 lines 29-36) and a plurality of pre-programmable modes (Column 6 lines 13-14). There is an interface between the detector subsystem and a gas handling subsystem that allows insertion of a flow path 44, an exhaust 40, a feedback 52, and a trap 46. The software control subsystem comprises a data logger (Fig. 1 part 21), a sequencer (Fig. 5 part 76, a monitor (Fig. 1 part 18), a display (Column 8 lines 32-34) and a recording function (Column 10 line 29). This module comprises a membrane interface probe apparatus (Fig. 3) with an external barrel having a cavity 30 adapted to improve watertight integrity

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by including underwater cabling electrical couplings 38 and 52 and O-ring mechanical couplings 42. The membrane interface probe is operative to improve circumferential sensing (Column 2 lines 28-41) as a series of sensors may be placed in a circle. The probe is also operative to increase likelihood of collection of volatile organic mass (Column 2 lines 44-46). The membrane interface probe sensor's modular components can be replaced on site (Column 8 lines 1-3). The apparatus comprises a removable trap 28 (see Column 8 lines 1-3) that traps volatile organic compounds (Column 8 lines 7-10). The sensor contains a heated transfer line 86 to surface detector suite 44. Adriany anticipates a global positioning system integrated with its data acquisition system. Adriany's module flags sensors that detect a change in frequency and transmits a report of the data to a remote monitoring station, identifying where the pollution event is occurring (Column 10, lines 37-42).

8. The international search report cited four references that were less pertinent than Adriany or Robbat and thus were not used. McCoy (USP 5,283,767), Orr (USP 5,831,876), Walker (USP 5,828,751), and Orr (USP 5,835,386) do not teach a dryer moisture separator subsystem coupled to the flow control subsystem.

Conclusion

9. Claims 12-30 are rejected under 35 U.S.C. 112, first paragraph as non-enabling. Claims 12-31 are rejected under 35 U.S.C. 112, second paragraph, for not particularly pointing out and distinctly claiming the invention. Claims 1-32 are rejected under 35 U.S.C. 102(a) and (b) as being anticipated by Robbat and Adriany.

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCoy (USP 5,283,767) teaches a teleoperated apparatus for collecting environmental data in water. Orr (USP 5,835,386) discloses a method for collecting data for the purpose of managing storm water. Walker (USP 5,828,751) discloses a method and apparatus for acquiring and cryptographically certify a physical measurement. Orr (USP 5,831,876) discloses a method for monitoring air pollution by acquiring air quality data, storing the data, and transmitting and displaying it to an operator.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keri A. Moss whose telephone number is (571) 272-8267. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'LX' with a stylized flourish.

LYLE A. ALEXANDER
PRIMARY EXAMINER